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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,239	02/27/2002	Eugenia Jilinskaia	109412.128	2032

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WILMER CUTLER PICKERING HALE AND DORR LLP  
60 STATE STREET  
BOSTON, MA 02109

EXAMINER

BLECK, CAROLYN M

ART UNIT PAPER NUMBER

3626

DATE MAILED: 06/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/084,239

Applicant(s)

JILINSKAIA ET AL.

Examiner

Carolyn M. Bleck

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Notice to Applicant***

1. This communication is in response to the application filed on 27 February 2002.

Claims 1-16 are pending.

### ***Specification***

2. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

3. The abstract of the disclosure is objected to because it does not include the steps of the process or the organization and operation of the apparatus. Correction is requested. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(A) Claims 1 and 9 recite “a system for analyzing healthcare claims data with records in which the claims data can include entries for a service that was charged and what was paid for the service, wherein some of the claims data does not indicate either the amount charged or the amount paid.”

First, it is unclear if the healthcare claims data is stored in records because claim 1 appears to recite that the claims data and records are separate. Clarification is requested.

Second, claims 1 and 9 recite that the claims data can include entries for a service that was charged and what was paid for the service. Thus, claims 1 and 9 do not require that the claims data have this data. If this data is not included in the claims data, then it would appear that the steps of claims 1 and 9 would not occur. It is suggested that Applicant actively recite that the claims data must include this data.

Third, because it is not clear that the claims data must include entries for the service that was charged or paid, it is then unclear whether any of the claims data would

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not indicate either the amount charged or paid. It appears that it is necessary, however, that claims 1 and 9 indicate that the amount charged or paid has been omitted. Without this step, the claim consists simply of a database for storing claim records and a processor for analyzing claims data. It is further noted that the body of the claim recites "imputing charged or paid amounts where such amounts were not indicated." However, it is unclear what steps are performed if all of the claims data is in the records. It would appear then that the steps of the method would consist simply of a database for storing claim records and a processor for analyzing claims data. Applicant is requested to clarify these issues with claims 1 and 9.

It is also suggested that Applicant clarify the steps performed in "imputing charged or paid amounts" and "using the imputed amounts for analysis" because it is unclear what "imputing" or "analysis" consists of. For example, is the imputing charged or paid amounts based on historical data or is this performed by a human analyzing data presented on the screen? Also, within claim 9, it would appear that the recitation of "using the imputed amounts for analysis" is a form of intended use of the processor. Further, what type of analysis are the imputed amounts used for?

(B) Claims 4 and 12, lines 2-3, "the ratio variable for each data source" and "the combined sample" lacks proper antecedent basis. For purposes of applying prior art, claims 4 and 12 are being interpreted as "the processor estimates median values."

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(C) Claims 5 and 13, lines 1-2, “the slope of the regression line” and “the mean value of the ratio,” and “the initial value” lacks proper antecedent basis. Further, claim 13 refers to a single median value of the ratio however claim 12 refers to “median values” for distribution. It is unclear if there are a plurality of median values for a ratio or ratio variable required in claims 4-5 and 12-13. For purposes of applying prior art, claim 13 is being interpreted as “the processor uses regression analysis.”

(D) Claims 2-8 and 10-16 incorporate the deficiencies of claims 1 and 9 through dependency, and are therefore rejected for the same reasons.

***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1 and 9 fail to provide a practical application that produces a useful result. For an invention to be “useful,” it must provide a specific, substantial, and credible result. Here, claims 1 and 9 recite “using the imputed amounts for analysis.” This “result” appears to be so broad as to not be a specific or substantial result. Applicant fails to provide any specific types of analysis done on the data nor any specific results that occur from the analysis.

The tangible requirement requires that the process claim must produce a real-world result (i.e., not abstract). Here, claim 1 fails to provide a tangible result. Claim 1

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does not appear to provide any form of a tangible result, and only uses data for analysis. Claim 1 fails to provide any form of output (i.e., result) from the analysis, and thus fails to provide a tangible result.

Similar analysis applies to claims 2-8 and 10-16.

**NOTE:** For purposes of applying art, the examiner interprets the claims as best as possible in light of the 101 and 112 issues.

### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 7-9, and 15-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Provost et al. (6,341,265).

(A) As per claims 1 and 9, Provost discloses a method and system for determining whether claims are in condition for payment (Abstract), wherein the claims data is entered into a claim form (Abstract, col. 11 lines 29-49), wherein the claim data includes fields for a service that was charged and the claims are for procedures, services, or supplies (Abstract; Fig. 3, col. 11 lines 29-49) and the amount that the insurer paid/will pay (Fig. 3, col. 11 lines 29-49, wherein the claim data will not indicate the amount the

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insurer will pay before the server processes the claim (col. 11 lines 29-49), the method comprising processing claims by a server system and determining the amount the insurer will pay because the amount was not shown or entered on the claim form, wherein claims data is stored in databases (reads on “analyzing claims data and imputing charged or paid amounts where such amounts were not indicated”) (Fig. 1, Fig. 3, col. 7 lines 40-50, col. 11 lines 29-48), and then displaying the amount the insurer will pay on the client system (reads on “using the imputed amounts for analysis”) (Fig. 1, Fig. 3, col. 11 lines 29-48).

(B) As per claims 7-8 and 15-16, Provost discloses determining a charge amount and an amount an insurer will pay (Fig. 3, col. 11 lines 29-48).

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2-3, 6, 10-11, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Provost et al. (6,341,265) in view of Binder et al. (Binder, D.A. and Sun, W. (1996), Frequency valid multiple imputation for surveys with a complex design. Proceedings of the Survey Research Methods Section of the American Statistical Association, 281-286).



(A) As per claims 2-3 and 10-11, Provost fails to expressly disclose determining a ratio of the paid to charged values and determining a ratio for records that have non-zero values for both paid and charged amounts such that the charged amount is greater than or equal to the paid amount.

Binder discloses using ratio imputation to determine missing values (pp. 283-286 sections 3.2-3.3) (i.e., a ratio of paid to charged values). Binder does not expressly disclose that there are non-zero values used, however the Examiner respectfully submits that non-zero values are used in imputation. Non-zero values are used to ensure that the ratios do not result in invalid ratios (i.e., the denominator being zero) which would thus result in an invalid model for imputation. It is also noted that the charged amount is typically greater than or equal to the paid amount because a doctor charges more than an insurance company actually will pay.

(B) As per claims 6 and 14, Provost discloses the claims covering procedures, services, or supplies (Fig. 3). Provost does not expressly disclose the ratio being determined for different types of records. Binder discloses using ratio imputation based on imputation classes, which is common in non-response modeling (i.e., missing data) (Binder; page 284, section 3.3). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to include the features of Binder within the method and system of Provost with the motivation of having homogeneity within groups for modeling (Binder; page 284, section 3.3).

12. Claims 4-5 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Provost et al. (6,341,265) and Binder et al. (Binder, D.A. and Sun, W. (1996), Frequency valid multiple imputation for surveys with a complex design. Proceedings of the Survey Research Methods Section of the American Statistical Association, 281-286) as applied to claims 2-3 and 10-11, and further in view of Johnson et al. (Johnson, William, Yuichi Kitamura, and Derek Neal, Evaluating a Simple Method for Estimating Black-White Gaps in Median Wages, The American Economic Review, Vol. 90, No. 2, Papers and Proceedings of the One Hundred Twelfth Annual Meeting of the American Economic Association, (May 2000), pp. 339-343).

(A) As per claims 4-5 and 12-13, Provost and Binder do not expressly disclose estimating a median value. Johnson discloses using median regression in imputation (pg. 340 Table 1, pg. 342 col. 1, par. 3, col. 2, par. 1, Table 2). At the time the invention was made, it would have been obvious to use these methods within the system and method taught collectively by Provost and Binder with the motivation of determining missing values within a data set.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The cited but not applied prior art teaches medical claims integration and data analysis system (5,970,463), method and system for the dynamic

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analysis of data (6,636,862), method of adjudicating medical claims based on scores that determine medical procedure monetary values (6,879,959), electronic creation, submission, adjudication, and payment of health insurance claims (6,343,271), minimum income probability distribution predictor for health care facilities (6,044,351), health data processing system (5,778,345), method and system for generating feasible, profit maximizing requisition sets (5,615,109), techniques for estimating charges of delivering healthcare services (6,061,657), apparatus and method for improved estimation of health resource consumption (5,018,067), method and system for generating statistically-based medical provider utilization profiles (5,557,514), system for preventing cash flow losses (6,138,102), an article on software for multiple imputation, an article on multiple imputation approach to micro simulation, and an article on multivariate data imputation using trees.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carolyn Bleck whose telephone number is (571) 272-6767. The Examiner can normally be reached on Monday-Thursday, 8:00am – 5:30pm, and from 8:30am – 5:00pm on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached at (571) 272-6776.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


**15. Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**Or faxed to:**

(571) 273-8300	[Official communications]
(571) 273-8300	[After Final communications labeled "Box AF"]
(571) 273-6767	[Informal/ Draft communications, labeled "PROPOSED" or "DRAFT"]

Hand-delivered responses should be brought to the Knox Building, Alexandria, VA.

  
**Carolyn M. Bleck**  
**Patent Examiner**  
**Art Unit 3626**